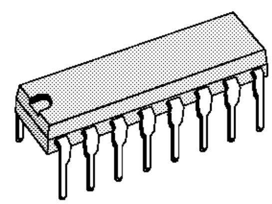
TDA8173

TV VERTICAL DEFLECTION OUTPUT CIRCUIT

- POWER AMPLIFIER
- FLYBACK GENERATOR
- THERMAL PROTECTION
- REFERENCE VOLTAGE



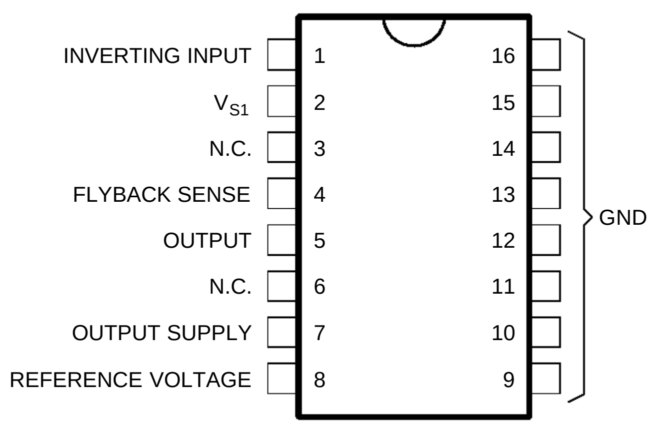
DIP16
(Plastic Package)

ORDER CODE : TDA8173

DESCRIPTION

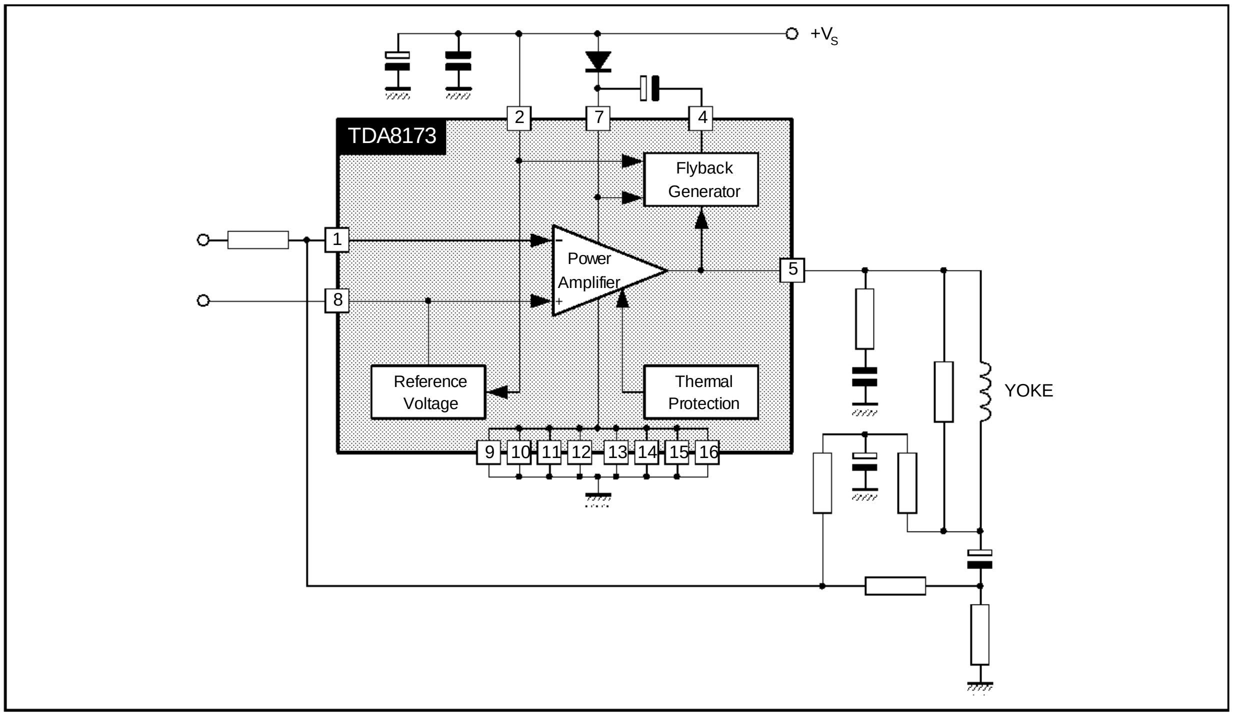
The TDA8173 is a monolithic integrated circuit in POWERDIP package. It is a high efficiency power booster for direct driving of vertical windings of TV yokes. It is intended for use in Color and B & W television sets as well as in monitors, and displays.

PIN CONNECTIONS (top view)



8173-01.EPS

BLOCK DIAGRAM



8173-02.EPS

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_S	Supply Voltage (pin 2)	35	V
V_5	Flyback Peak Voltage	60	V
V_4	Voltage at Pin 4	$+ V_s$	
V_1, V_8	Amplifier Input Voltage	$+ V_s$ $- 0.5$	V
I_o	Output Peak Current (non repetitive, t = 2 ms)	2.5	A
I_o	Output Peak Current at f = 50 or 60 Hz, $t \leq 10\ \mu s$	3	A
I_o	Output Peak Current at f = 50 or 60 Hz, $t > 10\ \mu s$	2	A
I_4	Pin 4 DC Current at $V_5 < V_2$	100	mA
I_4	Pin 4 Peak to Peak Flyback Current at f = 50 or 60 Hz, $t_{fly} \leq 1.5$ ms	3	A
P_{tot}	Total Power Dissipation at $T_{case} = 60\ °C$	6	W
T_{stg}, T_j	Storage and Junction Temperature	– 40 to 150	°C

8173-01.TBL

THERMAL DATA

Symbol	Parameter		Value	Unit
$R_{th\ (j-c)}$	Thermal Resistance Junction-case	Max.	15	°C/W
$R_{th\ (j-a)}$	Thermal Resistance Junction-ambient	Max.	70	°C/W

8173-02.TBL

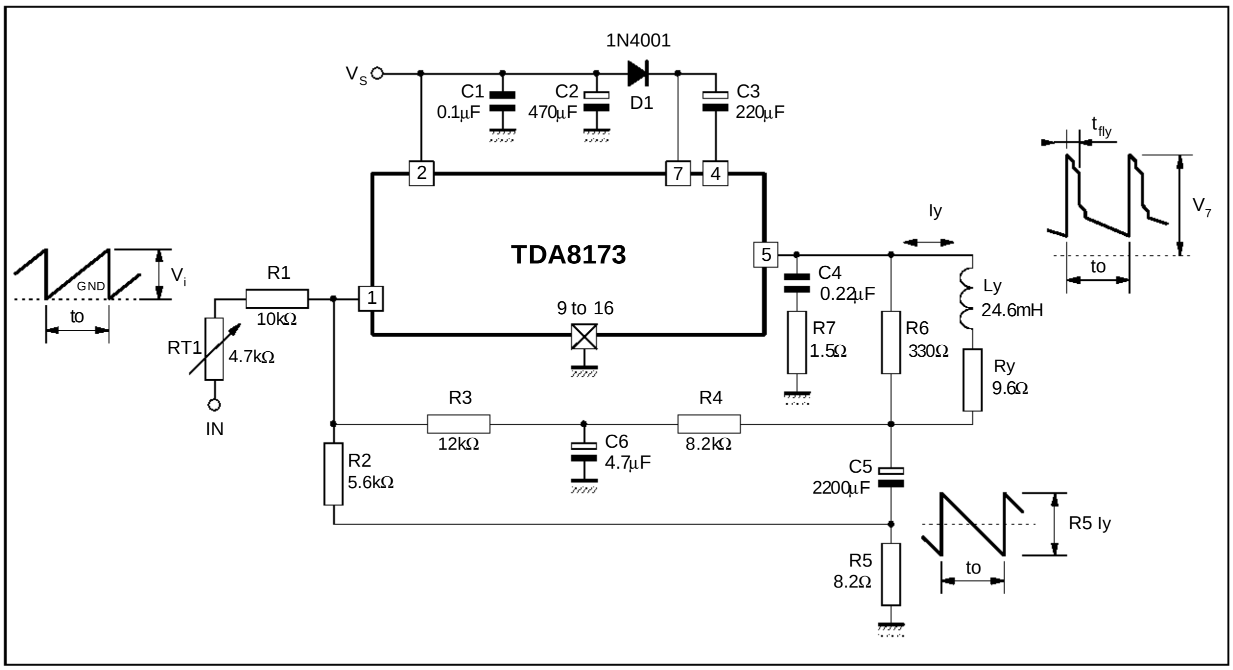
ELECTRICAL CHARACTERISTICS

(refer to the test circuits, V_S = 35V, T_{amb} = 25°C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_2	Pin 2 Quiescent Current	I = 0, I_5 = 0		8	16	mA
I_7	Pin 7 Quiescent Current	I = 0, I_5 = 0		16	36	mA
I_1	Amplifier Input Bias Current	V_1 = 1 V		– 0.1	– 1	µA
V_{4L}	Pin 4 Saturation Voltage to GND	I_4 = 20 mA		1		V
V_5	Quiescent Output Voltage	V_s = 35 V, R_a = 39 kΩ		18		V
V_{5L}	Output Saturation Voltage to GND	I_5 = 1.2 A		1	1.4	V
		I_5 = 0.7 A		0.7	1	V
V_{5H}	Output Saturation Voltage to Supply	– I_5 = 1.2 A		1.6	2.2	V
		– I_5 = 0.7 A		1.3	1.8	V
T_j	Junction Temperature for Thermal Shut Down			140		°C
V_8	Reference Voltage			2.2		V
$\frac{\Delta V_8}{\Delta V_S}$	Reference Voltage Drift versus Supply Voltage	V_s = 15 to 30 V		1	2	mV

8173-03.TBL

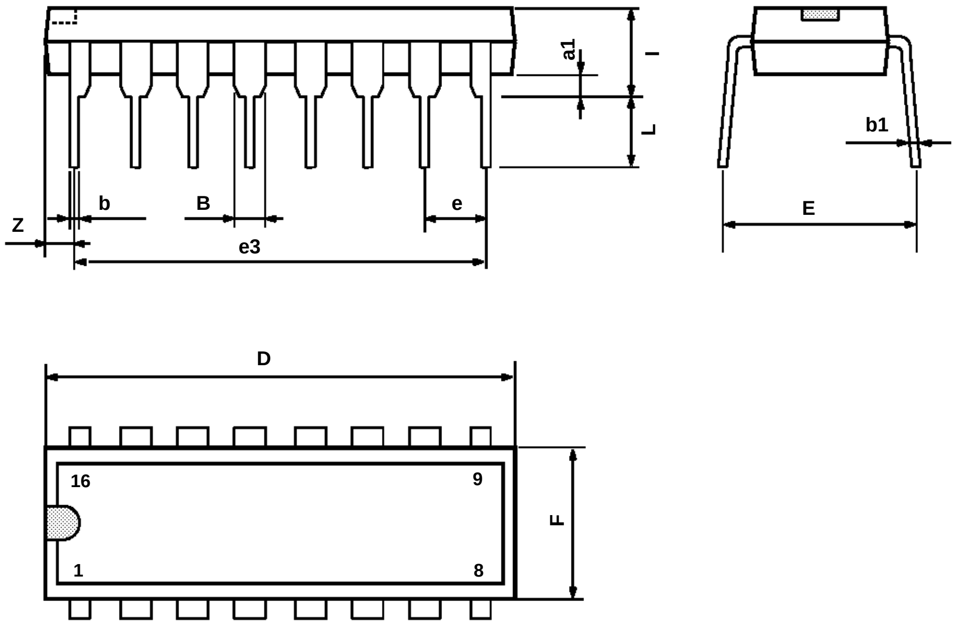
TEST CIRCUITS



8173-03.EPS

PACKAGE MECHANICAL DATA

16 PINS - PLASTIC DIP



PM-DIP16.EPS

Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
a1	0.51			0.020		
B	0.77		1.65	0.030		0.065
b		0.5			0.020	
b1		0.25			0.010	
D			20			0.787
E		8.5			0.335	
e		2.54			0.100	
e3		17.78			0.700	
F			7.1			0.280
i			5.1			0.201
L		3.3			0.130	
Z			1.27			0.050

DIP16.TBL